

CLAIMS

What is claimed as invention is:

5 1. A solid, water-soluble coolant system treatment tablet for addition to the coolant of an

engine coolant system, said tablet comprising, by weight based on dry composition:

from 0.36 to 0.50 percent sodium tetraborate;

from 0.00 to 0.20 percent sodium meta silicate;

from 0.04 to 0.20 percent sodium nitrate; and

10 from 0.05 to 0.20 percent sodium MBT.

2. The coolant system treatment tablet of claim 1, further including:

from 0.08 to 0.30 percent sodium nitrite.

15 3. The coolant system treatment tablet of claim 1, wherein said table comprises, by weight

based on dry composition:

0.45 percent sodium tetraborate;

0.03 percent sodium meta silicate;

0.31 percent sodium nitrite;

20 0.09 percent sodium nitrate; and

0.12 sodium MBT.

4. The coolant system treatment tablet of claim 1, further including:

from 0.00 to 0.20 percent sodium benzoate.

5. The coolant system treatment tablet of claim 1, further including sodium molybdate in

an amount of 0.00 to 0.15 percent, by weight based on dry composition.

6. The coolant system treatment tablet of claim 4, wherein said tablet comprises, by

weight based on dry composition:

0.41 percent sodium tetraborate;

10 0.11 percent sodium meta silicate;

0.19 percent sodium nitrite;

0.08 percent sodium nitrate;

0.11 percent sodium MBT; and

0.09 percent sodium benzoate.

15 7. A solid, water-soluble tablet for addition to the fluids of an engine coolant system, said

tablet comprising a scale and deposition preventative, a pH buffer, a chemical inhibitor, at least

one corrosion preventative, and a binder.

20 8. The tablet of claim 7, wherein said buffer is selected from the group consisting of di-

potassium phosphate and sodium tetraborate.

9. The tablet of claim 8, wherein said buffer is in an amount, by weight based on dry composition, of 0.01 to 0.50 percent.

10. The tablet of claim 7, further including a cavitation preventative.

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11. The tablet of claim 10, wherein said cavitation preventative is sodium nitrite in an amount, by weight based on dry composition, of 0.08 to 0.50 percent.

12. The tablet of claim 7, wherein said corrosion preventative is selected from the group

10 consisting of sodium meta silicate, sodium nitrate, sodium MBT, sodium benzoate, sodium molybdate, and combinations thereof.

13. The tablet of claim 12, wherein said corrosion preventative includes, by weight based on dry composition:

15 from 0.00 to 0.20 percent sodium meta silicate;

from 0.04 to 0.20 percent sodium nitrate; and

from 0.05 to 0.20 percent sodium MBT.

14. The tablet of claim 13, further including, by weight based on dry composition, from

20 0.01 to 0.20 percent sodium benzoate.

15. The tablet of claim 7, wherein said binder is selected from the group consisting of

sodium MBT and sodium tolyltriazole.

16. The tablet of claim 15, wherein said binder is in an amount, by weight based on dry

5 composition, of 0.05 to 0.50 percent.

17. A solid, water-soluble coolant system treatment tablet for addition to an engine

coolant system employing extended life coolants having carboxylic chemical inhibitor ingredients,

said tablet comprising, by weight based on dry composition:

10 from 0.00 to 0.50 percent sodium benzoate;

from 0.00 to 0.30 percent sodium nitrate; and

from 0.05 to 0.50 percent binder and corrosion preventative selected from the group
consisting of sodium MBT and sodium tolyltriazole.

15 18. The tablet of claim 17, wherein said sodium benzoate is in an amount, by weight

based on dry composition, of 0.39 percent, said sodium nitrate is in an amount, by weight based

on dry composition, of 0.22 percent, and said binder and corrosion preventative is in an amount,

by weight based on dry composition, of 0.39 percent.

20 19. A method of recharging the chemical inhibitor package in an internal combustion

engine coolant system having an overflow canister, comprising the steps of:

(a) providing a plurality of the coolant system treatment tablets of any one of claims 1

through 18, inclusive;

- (b) determining the cooling system capacity; and
- (c) inserting at least one coolant system treatment tablet into the cooling system overflow canister according to the amount required for the cooling system capacity.

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